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10/605,687	10/17/2003	Dean Willberg	56.0758	2686

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EXAMINER
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GULAKOWSKI, RANDY P

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

8

<b>Office Action Summary</b>	Application No. 10/605,687	Applicant(s) WILLBERG ET AL.	
	Examiner C. R. Richard	Art Unit 1712	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 December 2005.  
 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.  
     4a) Of the above claim(s) 12-14 is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-11 and 15 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☒ Claim(s) 1-15 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant has confirmed election without traverse to prosecute the invention of group I (claims 1-11), and the withdrawal of claims 12-14 from further consideration, as being drawn to a non-elected invention.

### ***Specification***

2. The disclosure is objected to because of the following informalities. The section heading just ahead of paragraph 8 refers to sequences, yet the section in question concerns the drawings. A section heading referring to the drawings now appears (after Applicant's latest amendment) just ahead of paragraph 7 which seems out of place in the context. Appropriate correction is required.

### ***Claim Interpretation***

3. Claim 15 is a composition claim, but recites a limitation that is "process like" – "forms a self-destructing filter cake", but there is no indication as to when this happens. Given the overall context of the specification and claims, this last mentioned limitation is taken to mean "capable of forming a self-destructing filter cake in some oilfield treatment application".

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 7-9 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Cantu et al. in US Patent 4,957,165. Cantu teaches a well treatment process and corresponding fluid.

Cantu teaches as a component in a fluid, condensation products of hydroxyacetic (glycolic) acid with itself or compounds containing other hydroxy, carboxylic acid or hydroxycarboxylic acid moieties; these products are solids and insoluble in aqueous and hydrocarbon media (see column 2, lines 27-45). The condensation product has a variable particle size distribution (see column 3, lines 10-12). The hydroxyacetic acid condensation product can be used as the sole fluid loss additive or in combination with other fluid loss additives (see column 3, lines 25-30). Calcium carbonate may be used as another fluid loss additive and will dissolve in acid (see column 1, lines 60-64).

A gelling agent like hydroxyethyl cellulose may be included and the gell formed is broken by the hydroxyacetic acid produced from the acid condensation product downhole - avoiding a later acidizing step and leaving the formation undamaged [at least relatively speaking] (see Example 1).

As to claim 15, the filter cake recited would inherently form downhole using the fluid taught by Cantu containing calcium carbonate.

6. Claims 1-5, 7, 10-11 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Cantu et al. in US Patent 4,986,354. Cantu teaches microencapsulated oil field chemicals.

The reference teaches compositions made by placing an oil field chemical in microcapsules made from condensation products of hydroxyacetic acid alone or with compounds containing other hydroxy, carboxylic acid or hydroxycarboxylic acid moieties such as lactic acid (see column 1, lines 37-47 and column 2, lines 8-15). The condensation products are solids and insoluble in aqueous and hydrocarbon media (see column 1, lines 50-65). A variety of oil field chemicals that fall in the class of solid acid reactive materials may be included in the capsules, and in particular, borate cross linkers (see column 2, lines 42 to column 3, line 7). The microcapsules may be placed in an oil-based fluid (see column 3, lines 40-45); this fluid would effectively act as/form a hydrolysis-delaying coating for the capsules.

As to claim 15, the composition taught by Cantu is at least inherently capable of forming a filter cake downhole.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-7, 10-11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cantu et al. in US Patent 4,986,354. The teachings of Cantu have been detailed above.

Cantu teaches all of the limitations of the rejected claims in the proper context, except for an explicit teaching of any of the specific species called out in claim 6; Cantu does teach the use of borate cross linkers in the same context as borax in claim 6, however. As borax is a very common variety of borate cross linker, the teaching of borate cross linkers by Cantu would have made it obvious to one of ordinary skill in the art to employ borax as in claim 6. The rejected claims are thus obvious.

9. Claims 1, 8-9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cantu et al. in US Patent 4,957,165 in view of Johnson et al. in US Patent 5,325,921. The teachings of Cantu have been detailed above. Johnson's teachings concern fluid loss control particulates.

Cantu teaches all of the limitations of the rejected claims in the proper context, but does not teach all of the specific species called out in claim 9. Cantu does teach calcium carbonate as a fluid loss prevention agent as seen above; Johnson also teaches this (see column 3, lines 62-66 of Johnson). Johnson teaches that metal hydroxides may also be used in place of calcium carbonate and similar fluid loss agents (see column 4, lines 64-66); this is not taught by Cantu. One of ordinary skill in the art would have realized that this teaching of metal hydroxides includes aluminum and magnesium hydroxides. These hydroxides are commonly used in oil field applications, including in fluid loss prevention. In any case, they would clearly perform s required.

From these teachings, it would have been obvious to one of ordinary skill in the art to use magnesium or aluminum hydroxide in place of calcium carbonate in the compositions of Cantu, thus rendering the rejected claims obvious.

10. Claims 1, 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cantu et al. in US Patent 4,957,165 in view of Lee in US Patent 6,817,414. The teachings of Cantu have been detailed above. Lee's teachings concern filter cake cleanup.

Cantu teaches all of the limitations of the rejected claims in the proper context, but does not teach all of the specific species called out in claim 7, such as polylactic acid. Lee teaches that the acidic by-product of polyglycolic (polyhydroxyacetic) acid hydration [hydrolysis] may be used in removing filter cake (see Abstract); polylactic acid may be used in place of the polyglycolic (see column 3, lines 15-27).

From these teaching it would have been obvious to one of ordinary skill in the art to use polylactic acid in place of the polymer of hydroxyacetic acid in the compositions of Cantu, thus rendering the rejected claims obvious.

### ***Double Patenting***

11. Claims 1, 4, 7 and 9-10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 4-5, 8, 10, and 21-23 of copending Application No. 10/605,784. Although the conflicting claims are not identical, they are not patentably distinct from each other. Compositions of the rejected claims are taught by or are obvious over compositions in the cited method claims of 10/605,784.

In particular, claims 4 and 21 of 10/605,784 separately teach compositions within the scope of rejected claim 1. Claim 8 of 10/605,784 teaches compositions within the scope of rejected claim 4. Claim 22 of 10/605,784 teaches compositions within the scope of rejected claim 7. Claims 5 and 23 of 10/605,784 separately teach compositions within the scope of rejected claim 9.

A combination of claims 4 and 10 of 10/605,784 render rejected claim 10 obvious. Claim 4 of 10/605,784 teaches all of the limitations of rejected claim 10, except for the hydrolysis delaying coating which is taught by claim 10 of 10/605,784. It would have been obvious to one of ordinary skill in the art to use a delay coating to give time

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for the composition to travel downhole where it is needed before hydrolysis releases the active agent.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Response to Arguments***

12. Applicant's arguments filed 9 December 2005 have been fully considered but they are not persuasive.

Applicant has requested amendments to the body of the specification, claims and drawings. There do not appear to be any new matter issues with these requests, and they are hereby entered. Claim 8 has been amended, claims 12-14 withdrawn due to restriction (Applicant confirming the telephone election) and new claim 15 added; claims 1-11 and 15 are now pending.

The Examiner notes the following regarding the requests recited here. The amendment to the specification appears to reference the wrong paragraph; it looks like it should have been to [0008] and not [0007] as indicated by Applicant, so the previous objection stands and a new one is made above. Claim 8 has been amended such that the previous objection is mooted; new claim 15 has been interpreted by the Examiner in discussion above. The replacement drawing sheet contains characters that are clearly extraneous to the drawing; the Examiner will accept this sheet (minus these characters), but this practice by Applicant should be avoided in future.

As to the rejections over the prior art, the Examiner first notes the following. Applicant's arguments seem to depend in large part (implicitly or explicitly) on a supposed "teaching away" in the references. Such an argument is not relevant in a 35 USC 102 rejection, unless the reference clearly teaches not to use or do something in the sense that it will not work as required or something like that; a teaching that using or doing something is not preferred or will not work as well as alternatives (which is the case here) is not sufficient to negate a 102 rejection. A less stringent "teaching away" may be sufficient to negate a 35 USC 103 rejection, but as will be explained, the alleged teaching away in this case is not sufficient.

The following from the MPEP 2131 should be considered in this regard as to anticipation:

TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF THE CLAIM

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). >"When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art." *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001) [emphasis added by the Examiner]... The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

In addition, the following from MPEP 2145 should be taken into account as to obviousness:

The Nature of the Teaching Is Highly Relevant

A prior art reference that "teaches away" from the claimed invention is a significant factor to be considered in determining obviousness; however, "the nature of the teaching is highly relevant and must be weighed in substance. A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use." *In re Gurley*, 27 F.3d 551, 554, 31 USPQ2d 1130, 1132 (Fed. Cir.

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1994) ... Furthermore, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

As to the rejection under 35 USC 102(b) over Cantu '165, the Examiners agrees with most of the commentary on the reference by Applicant, but believes that Applicant has gone beyond what the references teaches in some important respects, and Applicant has ignored some prominent features of the rejected claims. In particular, Cantu '165 does NOT say that calcium carbonate cannot be used in the formulations taught; in fact, the reference teaches at column 3 that other fluid loss additives may be used with the hydroxyacetic acid condensation products without excepting calcium carbonate and anything else for that matter; the reference also teaches that calcium carbonate is a solid fluid loss additive at column 2. The problem cited for using calcium carbonate is that the subsequent acidizing required causes formation damage; it is relevant that this acidizing would be normally understood to mean by a strong mineral acid. Cantu makes use of hydroxyacetic acid condensation products that operate by forming [a weaker] acid **in situ** [intermixed with a gel] which would produce no formation damage [or at least much less damage] (see discussion near the end of Example 1 backing this up). Acid formation by the breakdown of the hydroxyacetic acid product would (inherently) dissolve the calcium carbonate. Cantu thus teaches the same composition as Applicant, being used for the same basic purpose, operating in the same way. Note that the rejected claims are "comprising", so the presence of a gel in Cantu '165 is not an issue – both are well treatments also. The rejection is maintained

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and is expanded to include new claim 15 given the interpretation of this claim given above.

In regards to Cantu '165, Applicant should note that (especially given the recitations in claims 5 and 8) that the cellulose derivative gelling agent and/or gel could act as the "solid acid-reactive" material, especially if "solid acid-reactive" means reactive with the solid acid material – in Cantu, the degrading hydroxyacetic acid condensation product.

As to the rejections under 35 USC 102(b) and 103(a) over Cantu '354, Applicant's argument is basically that the Examiner is wrong without any real explanation being given as to how. The rejections are maintained, since proper cases for anticipation and obviousness have been laid out in detail in the previous Office Action and are repeated above; these rejections are expanded to include new claim 15 as explained above.

As to the rejection under 35 USC 103(a) over Cantu in view of Johnson, the Examiner does NOT agree that there is a "teaching away" from using calcium carbonate (see above discussions on this point), and even if there is one, it is by nature insufficient to negate a determination of obviousness here. Clearly, one of ordinary skill in the art would have realized from the teachings of Cantu that the inclusion of calcium carbonate does not prevent the composition to function for its intended purpose, even if Cantu could be read as indicating there would be less formation damage without calcium carbonate in a Cantu composition, and Cantu does NOT say that. It is the subsequent acidizing [normally using strong mineral acid] that is the issue, and the use of the

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hydroxyacetic acid product gets around this, as one of ordinary skill in the art would glean from the overall teachings of Cantu. The rejection is maintained and expanded to include new claim 15.

As to the rejection under 103(a) over Cantu in view of Lee, it seems to the Examiner that Applicant does not understand that a 102(e) type reference can be used in making a 103(a) rejection. Lee has a 102(e) date of September 20, 2002 and does not appear to ever have been commonly owned with the present application (see 35 USC 103(c)), and so is prior art against the rejected claims. The rejection is maintained and expanded to include new claim 15.

Applicant has not responded to the provisional obviousness type double patenting rejection over Application No. 10/605,784. In the interests of speedy prosecution, the Examiner interprets this to mean that Applicant will wait to take appropriate action when certain what the final claims in question will be. Note that it is customary to explicitly reply to such a rejection, and Applicant should do so in future. Since Applicant did not explicitly indicate anything as to this rejection, it is repeated above and explicitly maintained.

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See

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MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

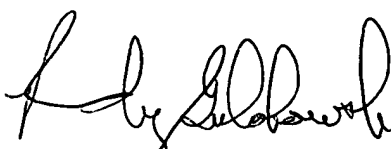
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. R. Richard whose telephone number is 571-272-8502. The examiner can normally be reached on M-Th, 8am-6pm and alternate Fridays, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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RANDY GULAKOWSKI  
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TECHNOLOGY CENTER 1700

OK to Enter Record  
Charles Examiner  
12/8/06

REPLACEMENT DRAWING

Acid Capacity for Dissolution of Calcite at 82°C

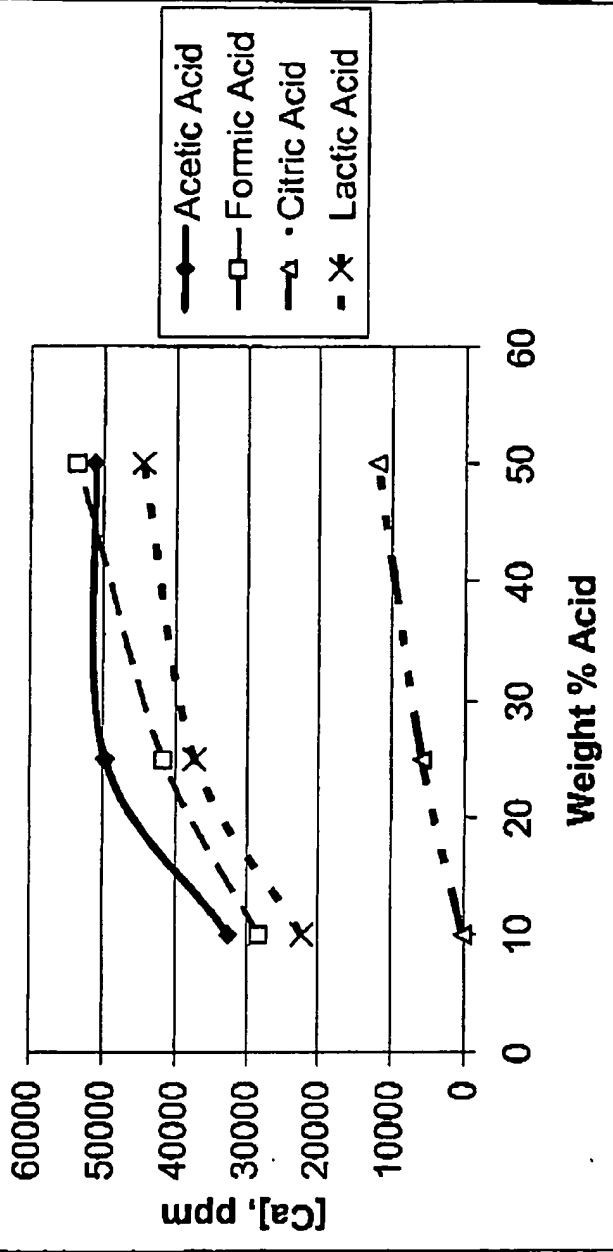


FIG. 1

Appl. No. 79/605,687

Amended Date: Dec. 9, 2005

Response to Office Action Dated Sep. 19, 2005

Amendments to the Drawings